

EXPRESS MAIL LABEL NO. EI 979108880 US
ATTORNEY DOCKET NO. 04150.0003U2
International Application No. PCT/GB2004/002779

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims

1. (Original) A method of producing a target protein, which method comprises expressing said protein in a host cell which contains a nucleic acid molecule which encodes a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein.
2. (Original) The method of claim 1 wherein said host cell is a eukaryotic cell.
3. (Original) The method of claim 2 wherein the host cell is a mammalian cell.
4. (Currently amended) The method of ~~any one of claims 1 to 3~~ claim 1, wherein said signal peptide has at least 8 amino acids.
5. (Original) The method of claim 4 wherein said signal peptide has at least 10 amino acids.
6. (Original) The method of claim 5 wherein said signal peptide has at least 12 amino acids.
7. (Currently amended) The method of ~~any preceding claim~~ claim 1, wherein the chimeric protein does not incorporate the majority of the native protein of the signal peptide.

8. (Original) The method of claim 7 wherein the chimeric protein incorporates less than 15 amino acid residues of the native protein of the signal peptide.
9. (Original) The method of claim 8 wherein said chimeric protein does not incorporate the native protein of the signal peptide.
10. (Currently amended) The method of ~~any preceding claim~~ claim 1, wherein the signal peptide is from a copepod or ostracod bulk-secreted protein.
11. (Original) The method of claim 10 wherein the signal peptide is from a *Guassia princeps* or a *Vargula hilgendorfii* bulk-secreted protein.
12. (Original) The method of claim 11 the signal peptide is from *Guassia princeps* or *Vargula hilgendorfii* luciferase.
13. (Original) The method of claim 12 the signal peptide has a sequence selected from SEQ ID No. 1 or SEQ ID No. 2 or fragments or derivatives thereof.
14. (Currently amended) The method of ~~any preceding claim~~ claim 1, wherein the signal peptide comprises the amino acid sequence ALICIA or a variant or fragment thereof.

15. (Currently amended) The method of ~~any preceding claim~~ claim 1, wherein the target protein is not naturally secreted.

16. (Currently amended) A nucleic acid molecule as defined in ~~any preceding claim~~ claim 1.

17. (Original) The nucleic acid of claim 16 which comprises a nucleotide sequence selected from nucleotide sequences encoding SEQID No. 1 or SEQID No. 2 or variants or fragments thereof or sequences complementary and/or capable of hybridising thereto under conditions of high stringency.

18. (Original) The nucleic acid of claim 17 which comprises a nucleotide sequence selected from SEQ ID No. 3 or SEQ ID No. 4 or variants or fragments thereof or sequences complementary and/or capable of hybridising thereto under conditions of high stringency.

19. (Currently amended) A chimeric protein molecule encoded by the nucleic acid molecule of ~~any one of claims 16 to 18~~ claim 16.

20. (Original) A vector comprising the nucleotide sequence of a signal peptide from a non-mammalian bulk-secreted protein upstream from a cloning site in which the coding sequence of a target protein can be inserted resulting in an expression product of said vector which is a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein.

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21. (Original) The vector of claim 20 wherein the cloning site is suitable for seamless cloning.

22. (Currently amended) A host cell containing the nucleic acid or vector of ~~any one of claims 16 to 21~~ claim 16.

23. (Original) The host cell of claim 22 wherein the host cell is mammalian.

24. (Currently amended) The host cell of ~~claims 22 or 23~~ claim 22, wherein the host cell is part of a stable cell culture.

25. (Currently amended) A method for obtaining a target protein from the media of a host cell culture comprising the host cell of ~~any one of claims 22 to 24~~ claim 22, which method comprises expressing protein from said host cells, harvesting the culture media of said cells and extracting and purifying said target protein therefrom.

26. (Currently amended) A kit comprising the vector of ~~any one of claims 20 or 21~~ claim 20 and a host cell.

27. (Original) A method of producing a target protein, which method comprises expressing said protein in a host cell which contains a nucleic acid molecule which encodes a chimeric

protein, said chimeric protein comprising a signal peptide from a bulk-secreted protein and said target protein, wherein said signal peptide is from a biological source taxonomically distinct from the host cell and wherein the chimeric protein does not include more than 15 residues of the signal peptide's native protein.

28. (Original) The method of claim 27 wherein the signal peptide is selected from *Guassia princeps* or *Vargulahlilgendorfii* luciferase.

29. (Currently amended) The method of ~~claims 27 or 28~~ claim 27 wherein the host cell is a mammalian cell.